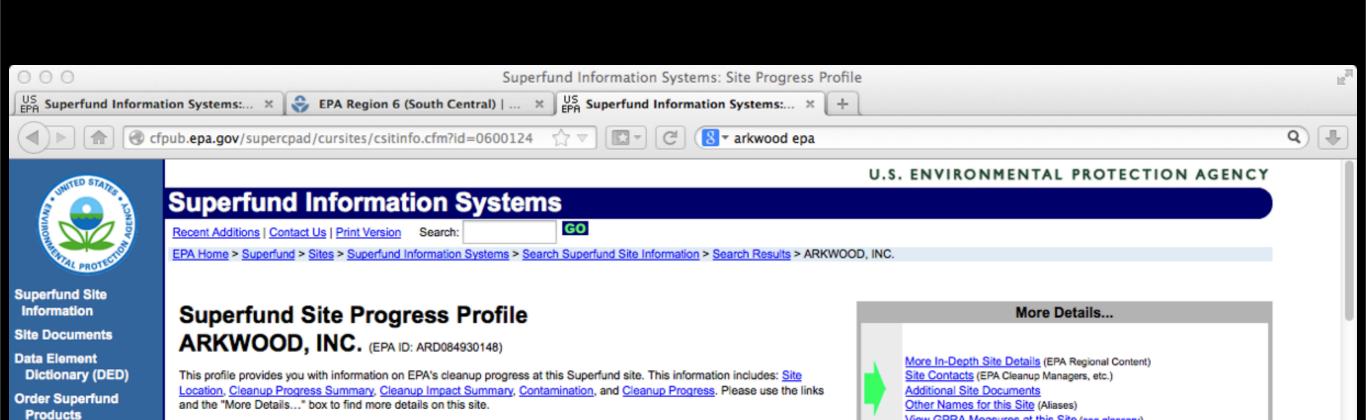
Koppers Co., Inc. (Oroville Plant)
Superfund Site in EPA Pacific Southwest
Region 9 is considerably more
contaminated than Arkwood, Inc.
Superfund Site in EPA South Central
Region 6 ever was...

...still I believe it can be instructive to compare these two sites, as they have many analogous aspects, including dioxin in the soils and PCP in the water.

Let's start at the same place for our comparison: the Superfund Site Progress Profiles on Superfund Information Systems, for which website EPA Headquarters has ownership and responsibility.

# Here's Arkwood first:



The data and content on this page were last updated on Wednesday, August 21, 2013. Site Location

Get an interactive map

Serving Louisiana, Arkansas, Oklahoma, New Mexico, Texas and

66 tribes

Site Address:

S. OF CITY @ CRICKETT RR JUNC.

OMAHA, Arkansas

72662

County: BOONE

Highlight all

### Cleanup Progress Summary



Physical cleanup activities have been completed.

view detailed list of cleanup activities at this site >>

The National Priorities List (NPL) is the list of the most hazardous sites across the U.S. and its territories.

This site is on the NPL and is known as a Final NPL site (see glossary).

Potentially Responsible Parties (PRPs) were involved in the cleanup effort (see glossary).

Superfund law requires that EPA give communities information about site progress and plans so that they can be actively involved in site cleanup decisions. Learn more about

### Cleanup Impact Summary

View GPRA Measures at this Site (see glossary)

At each site, EPA assesses the risk to humans and the environment and determines the best approach to address the risk. During initial site studies and cleanup, EPA determines if current human exposures to contaminants are under control and takes actions to control any possible human exposures until cleanup has been completed. Once complete, cleanup provides long-term human health and environmental protection at the site.



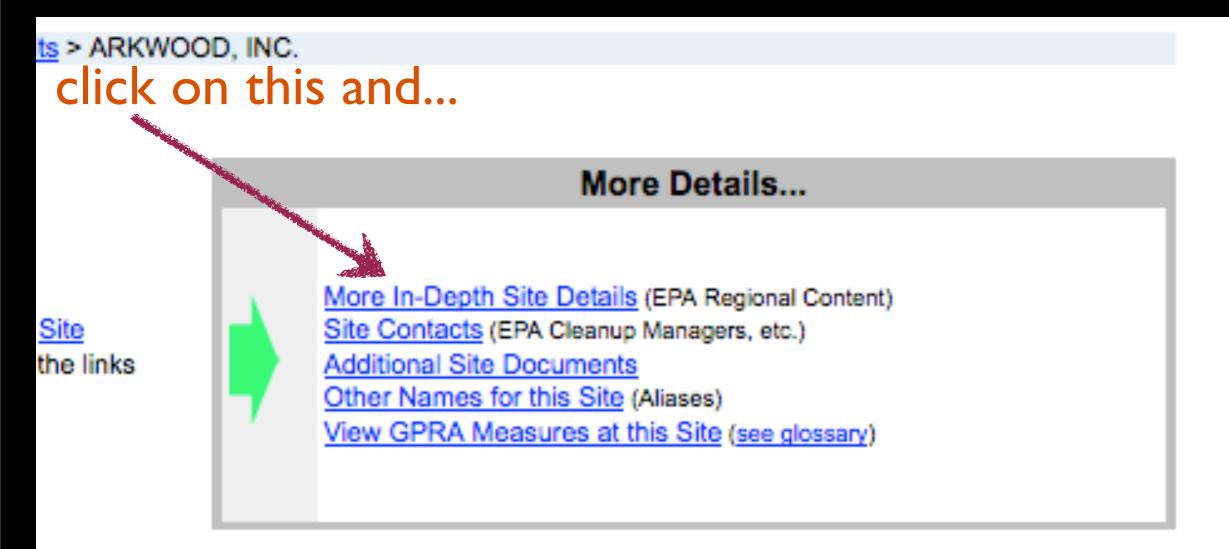
Current human exposures at this site are under control

see glossary definition for "Human Exposure Environmental Indicator Measure." >>

At each site with known ground water contamination, EPA documents whether ground water contamination is below protective risk-based levels or, if not, whether the migration of contaminated ground water is stabilized.

Contaminated ground water migration is

× Find: Q penta Previous



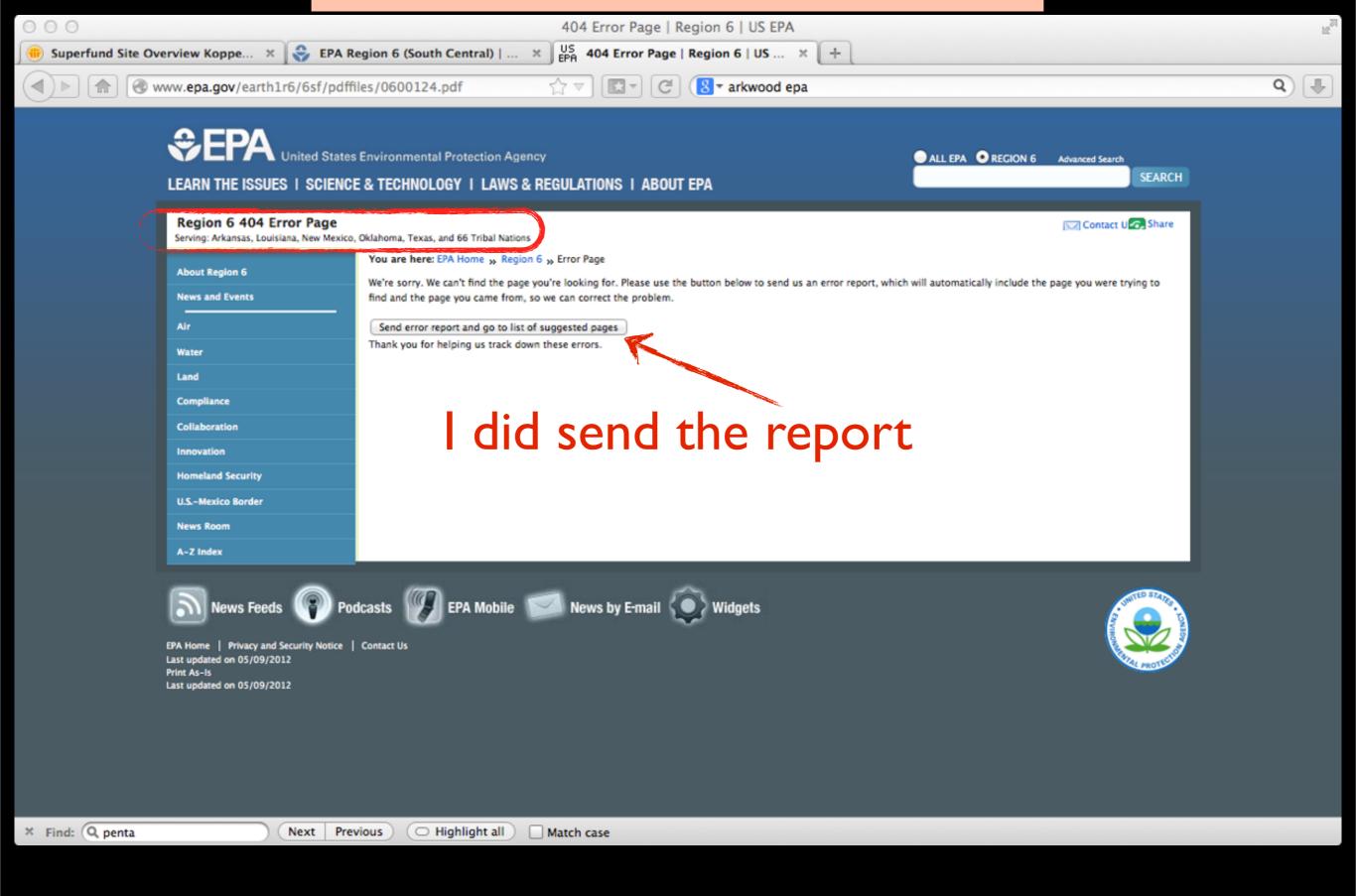
## nmary

# Cleanup Impact Summary

At each site, EPA assesses the risk to humans and the environment and determines the best approach to address the

...and the public user is taken to...

# **ERROR - HOW UNPLEASANT**

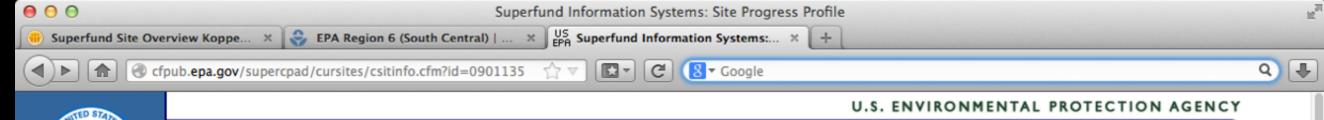


# Arkwood's Superfund Site Progress Profile found at <a href="http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0600124">http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0600124</a>

--- is a dead end ---

Now to the Superfund Site Progress
Profile for Koppers (Oroville Plant)
found at
http://cfpub.epa.gov/supercpad/cursites/
csitinfo.cfm?id=0901135

--- same starting point for the public ---





Superfund Site Information

**Site Documents** 

Data Element
Dictionary (DED)

Order Superfund Products

### **Superfund Information Systems**

Recent Additions | Contact Us | Print Version Search:

EPA Home > Superfund > Sites > Superfund Information Systems > Search Superfund Site Information > Search Results > KOPPERS CO., INC. (OROVILLE PLANT)

# Superfund Site Progress Profile KOPPERS CO., INC. (OROVILLE PLANT) (EPA ID: CAD009112087)

This profile provides you with information on EPA's cleanup progress at this Superfund site. This information includes: <u>Site Location</u>, <u>Cleanup Progress Summary</u>, <u>Cleanup Impact Summary</u>, <u>Contamination</u>, and <u>Cleanup Progress</u>. Please use the links and the "More Details..." box to find more details on this site.

The data and content on this page were last updated on Thursday, August 22, 2013.

### Cleanup Progress Summary



### Construction Complete

Physical cleanup activities have been completed.

view detailed list of cleanup activities at this site >>

The National Priorities List (NPL) is the list of the most hazardous sites across the U.S. and its territories.

This site is on the NPL and is known as a Final NPL site (see glossary).

Potentially Responsible Parties (PRPs) were involved in the cleanup effort (see glossary).

Superfund law requires that EPA give communities information about site progress and plans so that they can be actively involved in site cleanup decisions. Learn more about community involvement at this site >>

## Cleanup Impact Summary

More Details...

More In-Depth Site Details (EPA Regional Content)

View GPRA Measures at this Site (see glossary)

Site Contacts (EPA Cleanup Managers, etc.)

Additional Site Documents

Other Names for this Site (Aliases)

At each site, EPA assesses the risk to humans and the environment and determines the best approach to address the risk. During initial site studies and cleanup, EPA determines if current human exposures to contaminants are under control and takes actions to control any possible human exposures until cleanup has been completed. Once complete, cleanup provides long-term human health and environmental protection at the site.



Current human exposures at this site are under control

see glossary definition for "Human Exposure Environmental Indicator Measure." >>

At each site with known ground water contamination, EPA documents whether ground water contamination is below protective risk-based levels or, if not, whether the migration of contaminated ground water is stabilized.



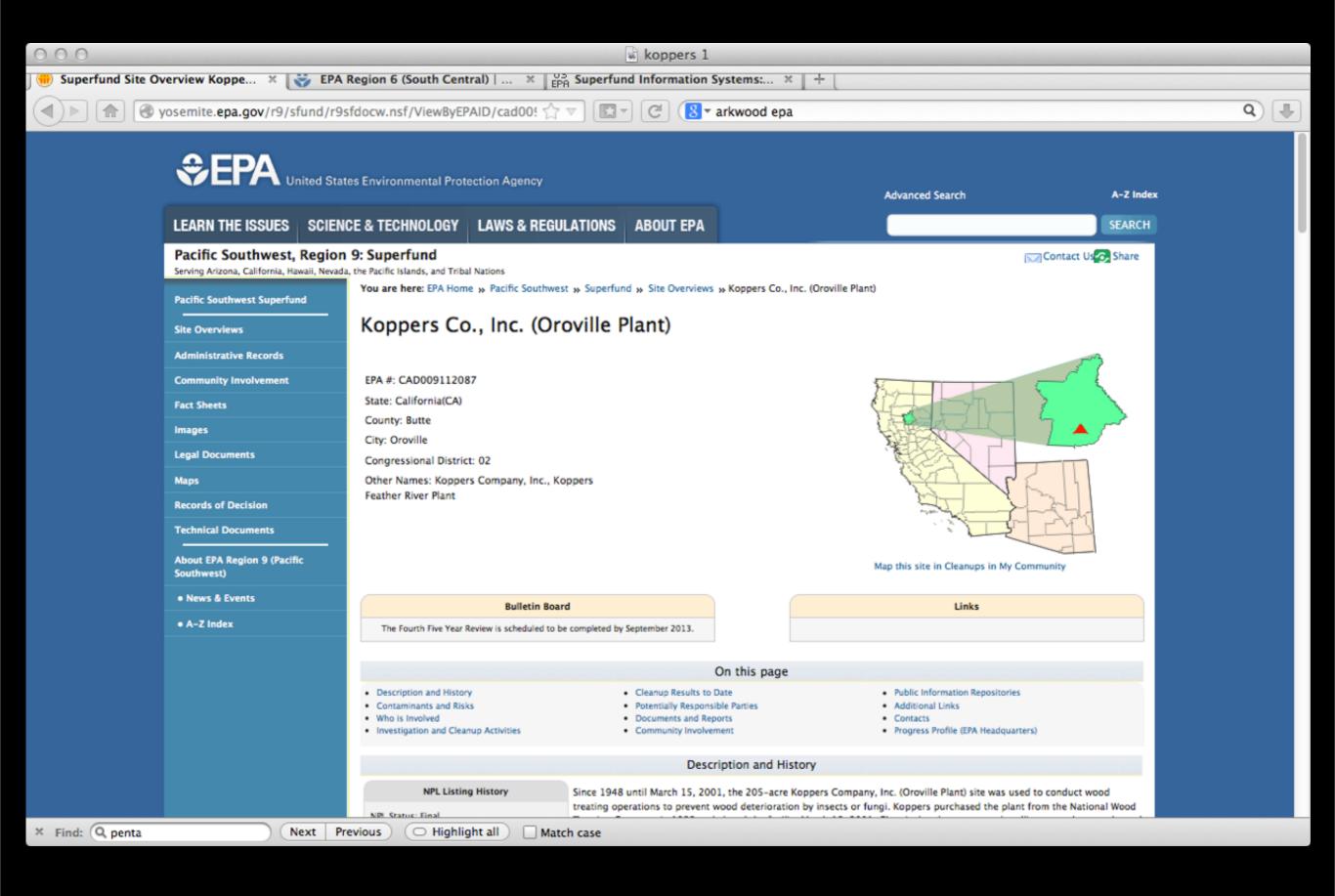
Contaminated ground water migration is under control

# Site Location Get an interactive map EPA Region 9 > Serving Arizona, California, Hawaii, Nevada, Pacific Islands and over 140 tribes Site Address: BAGGETT-MARYSVILLE RD OROVILLE, California

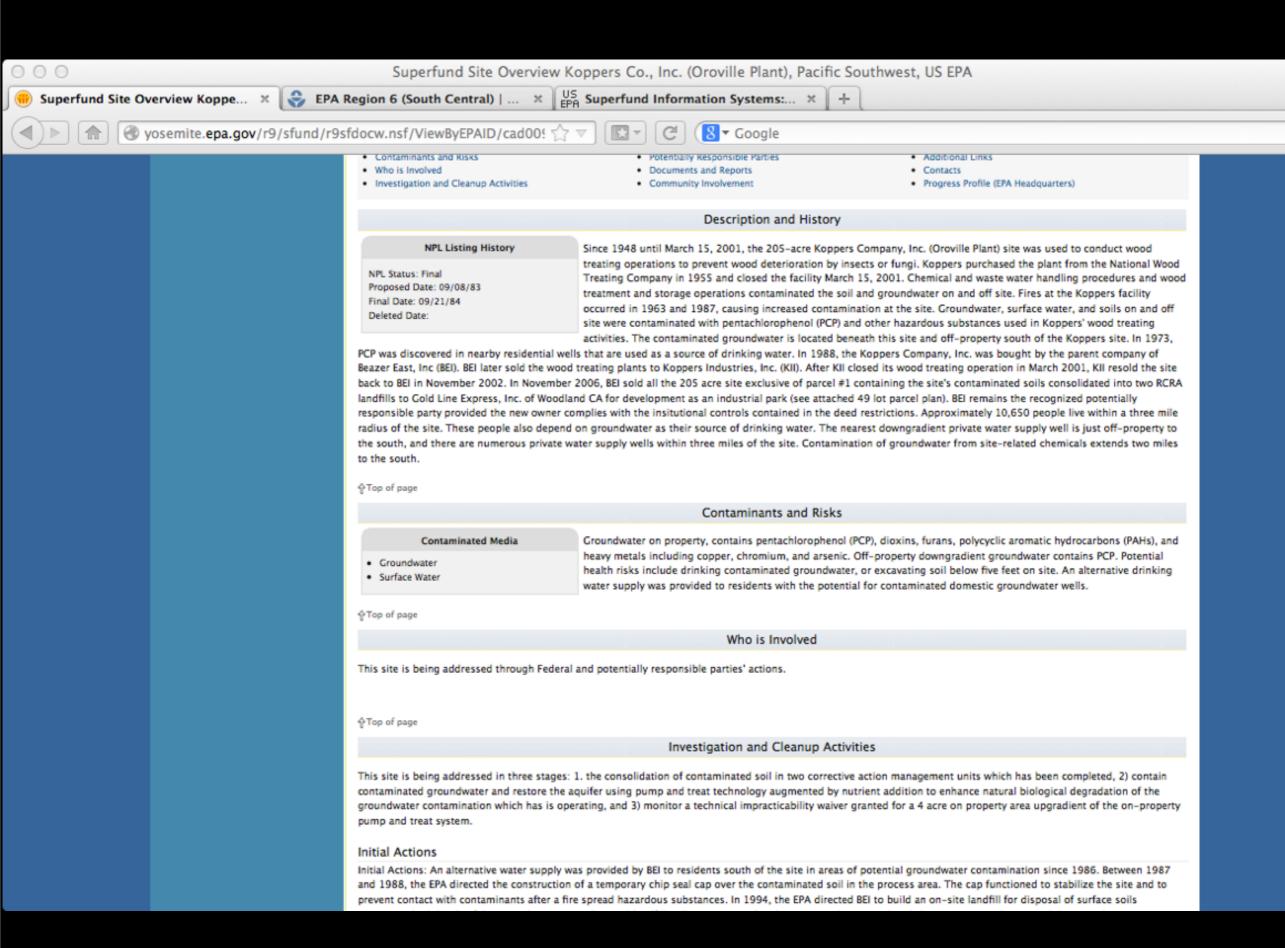
County: BUTTE

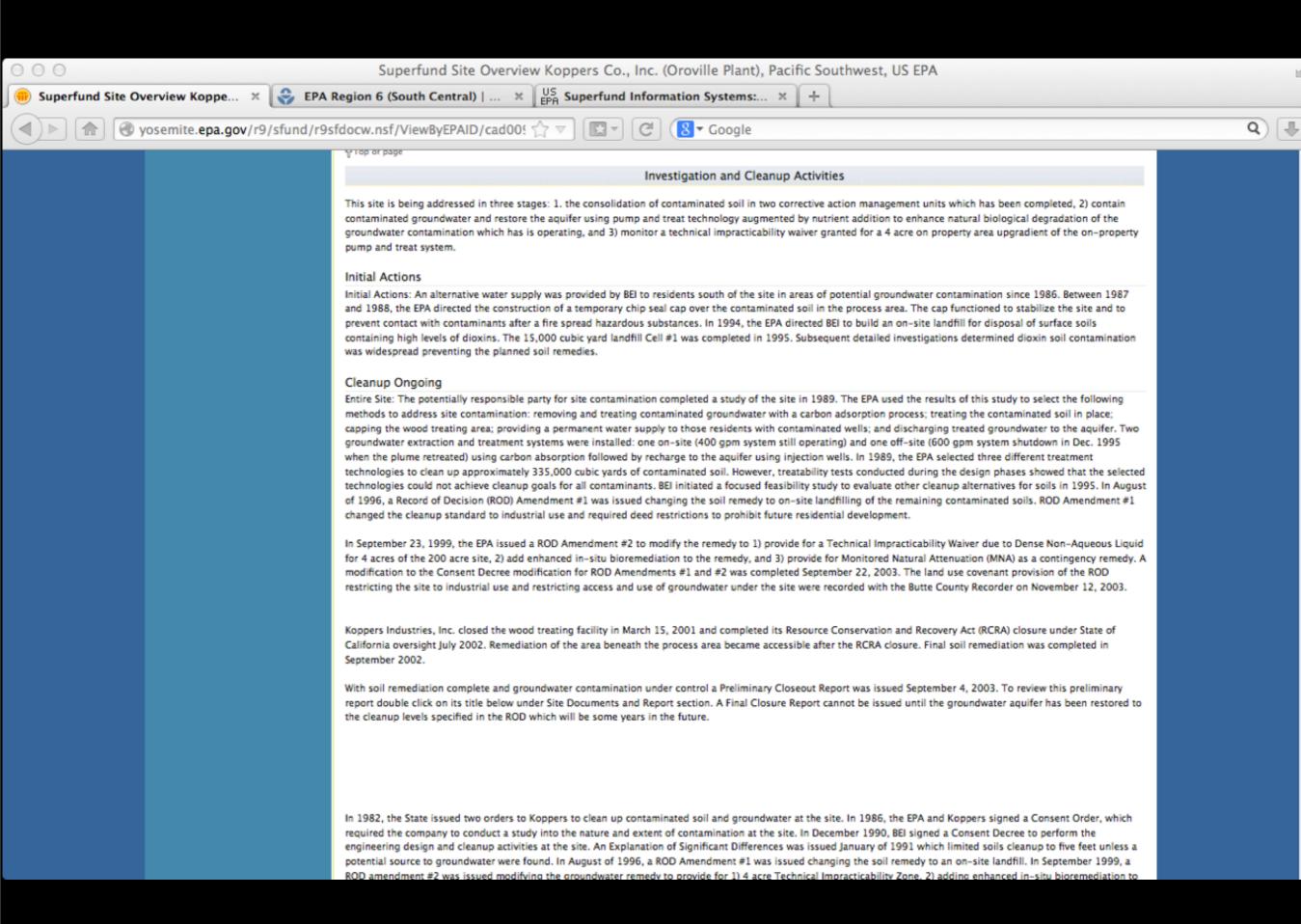
U.S. Congressional District: 01

...and the public user is taken to the following robust site on yosimite.epa.gov.



...scrolling down this first page...







### Groundwater

To prevent exposure to contaminated groundwater from domestic wells, city water was provided in 1986 to residents with potential for exposure and is paid for by BEI. As the off-property remediation has progressed the need for the alternative water supply program has been reduced from the original thirty-four (34) recipients to seven (7). The remaining seven (7) water supply recipients will continue to receive payment for alternative water supply usage until ROD standards have been met for their drinking water wells.

The off-property pump and treatment facility was taken off-line in December of 1995 as the plume degraded and no contaminants were being removed by the extraction wells. The treatment facility remains in reserve. The residual off-property plume is no longer being fed by contaminants on-property and is continuing to shrink. In August 1998 a pilot in-situ bioremediation program to assist in PCP degradation was initiated and incorporated into the remedy September 1999. The program was initiated with the addition of two nutrients (diammonium phosphate) and oxygen (magnesium peroxide) to three wells and monitoring at five wells. In the first quarter 2004 nutrient addition was reduced to adding only magnesium peroxide.

The on-property pump and treatment facility is still in operation preventing contaminated groundwater from moving off-property. In April 1998 a pilot in-situ bioremediation program was initiated on-property to degrade PCP and incorporated into the remedy in September 1999. The program initially added two nutrients (diammonium phosphate) and oxygen (magnesium peroxide) to six wells and monitoring at five wells. The magnesium peroxide addition was stopped the first quarter 2004. The PCP concentrations in the on-property wells are continuing to decrease. The on-property pump and treat facility will continue to operate until the ROD cleanup standards are meet and then will be held in reserve as long as the Technical Impracticability Waiver remains in effect.

March 8, 1999 BEI submitted a Final Evaluation of Technical Impracticability (TI) of Groundwater Restoration in the Former Creosote Pond and Cellon Blowdown Areas On-property. The TI waiver for the four acres was incorporated into the remedy with ROD Amendment #2 in September 1999. TI zone area and just downgradient is monitored for contaminant movement.

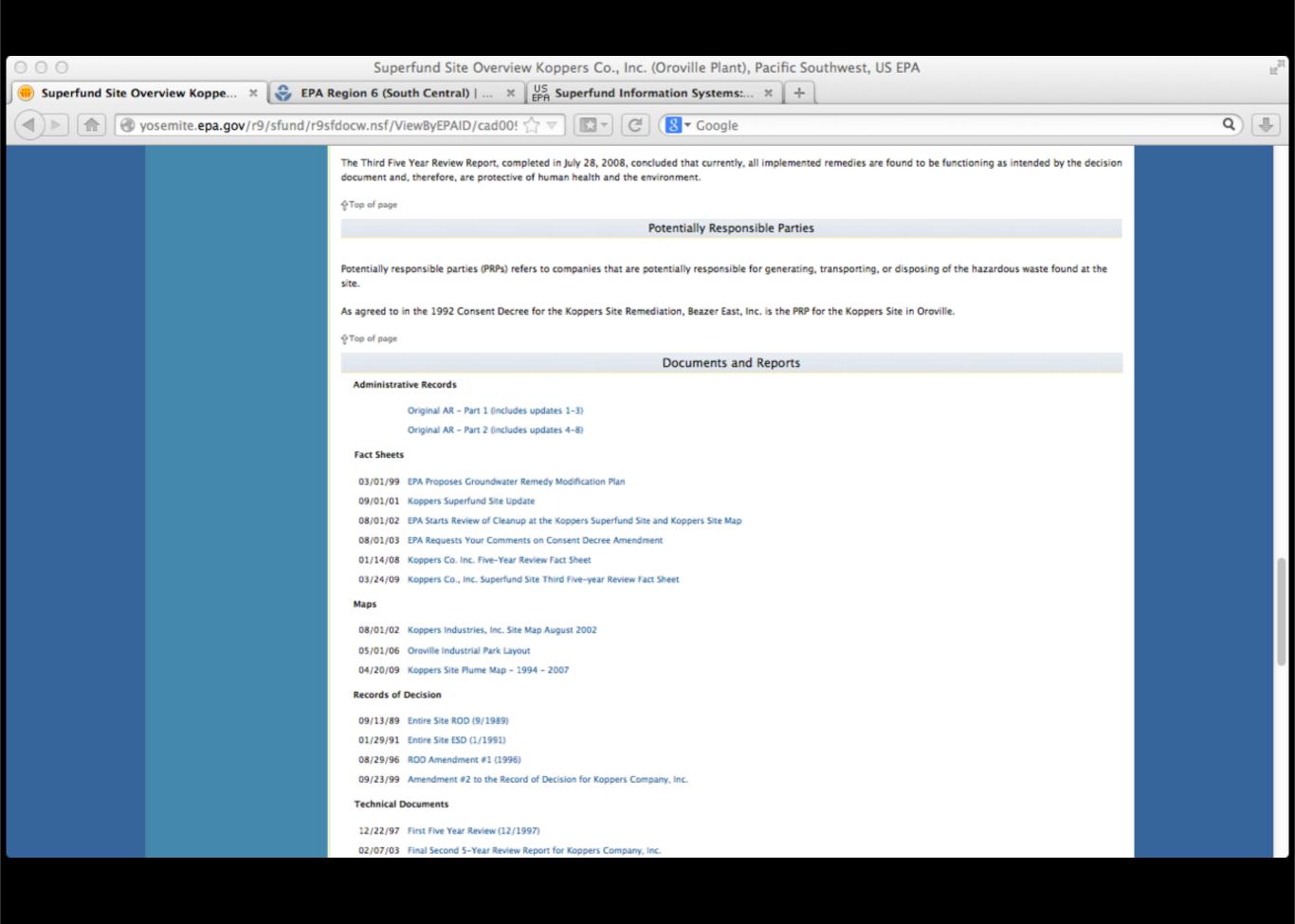
With the demolition of the wood treating facility in 2001 and 2002, boron was mobilized from the DriCon/CCA area and detected by monitoring well MW-8 above the action level. The downgradient on-property treatment plant does not treat for boron. MW-8 was converted to an extraction well to dilute the boron concentration to continue reinjection below the cleanup level. Boron readings are monitored at MW-8 and prior to reinjection for compliance with the ROD.

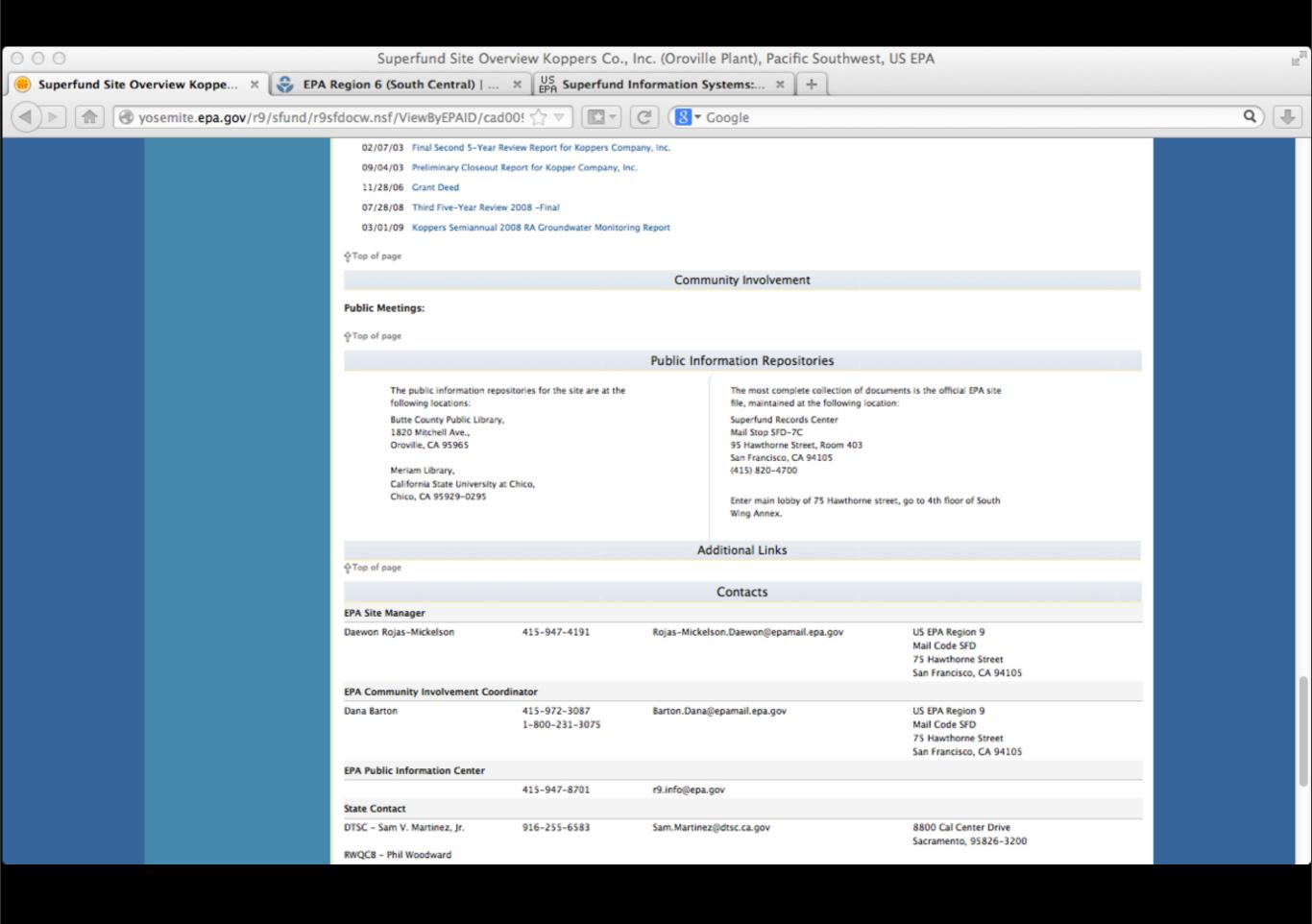
### Soils

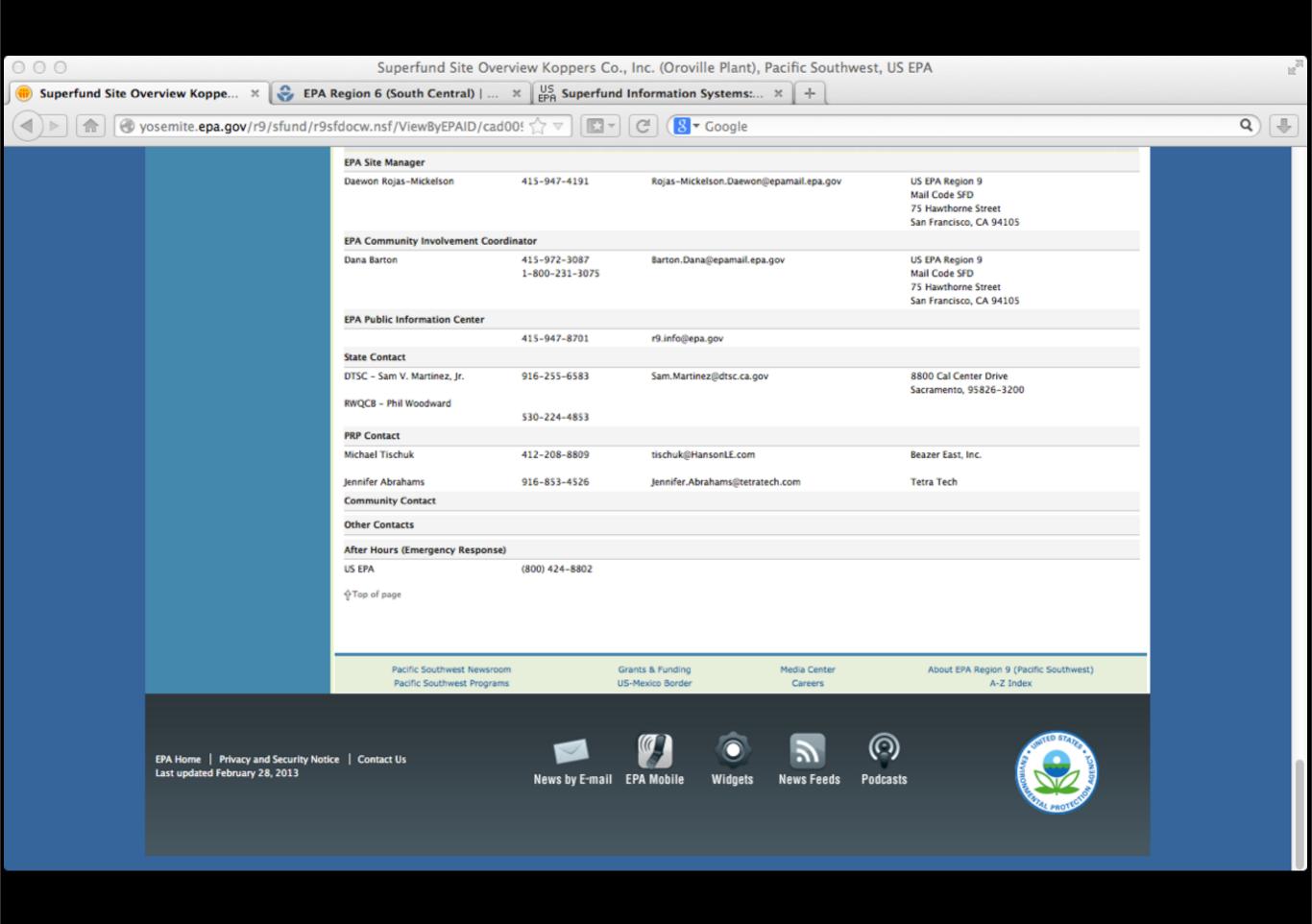
In 1987/88 a temporary chip seal cap was placed over the process area. In 1992, two concrete drip pads were installed in the process area to contain wood treating chemicals and prevent any further soil contamination. The cap and drip pads were demolished in 2002 as part of KII's facility closure. Two landfill cells were constructed for disposal of contaminated soils on site. Cell #1 (13,000 cubic yards) was completed in August 1995 as a Removal Action. Cell #2 (147,000 cubic yards capacity) was closed September 2002 with the completion of the soil remediation efforts for the site. 6,000 cubic yards of boron impacted soil was removed from the newly discovered Dri–Con/CCA source and placed in Cell #2 prior to its closure. With soil remediation complete and control of groundwater in place a Preliminary Closeout Report was issued for the site September 4, 2003. A land use covenant was recorded with the Butte County Recorder on November 12, 2003 restricting the site to industrial use and the access and use of groundwater under the site.

In November 2006, BEI sold all the 205 acre site exclusive of parcel #1 containing the site's contaminated soils consolidated into two RCRA landfills to Express, Inc. of Woodland CA for development as an industrial park (see attached 49 lot parcel plan).

The Third Five Year Review Report, completed in July 28, 2008, concluded that currently, all implemented remedies are found to be functioning as intended by the decision

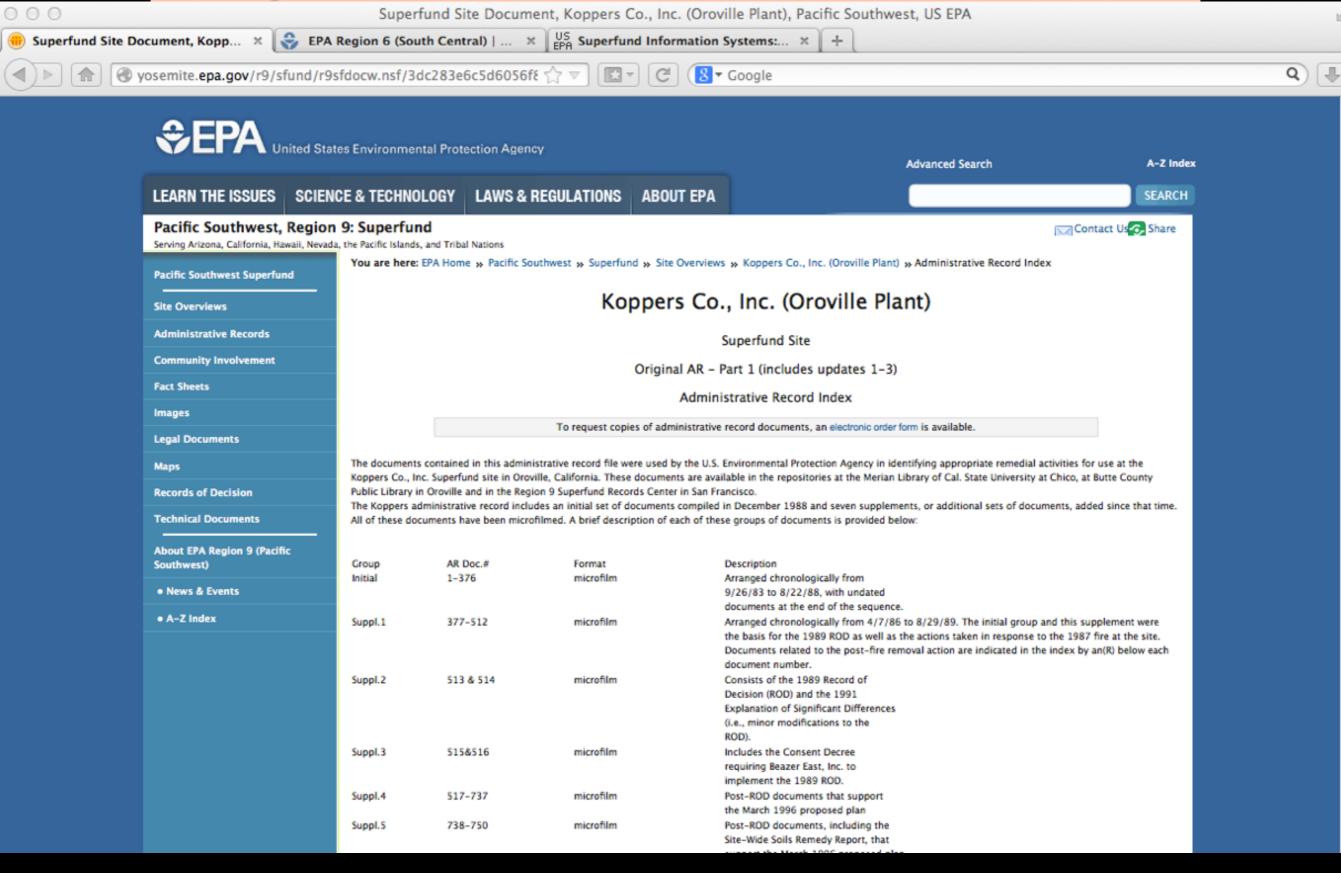




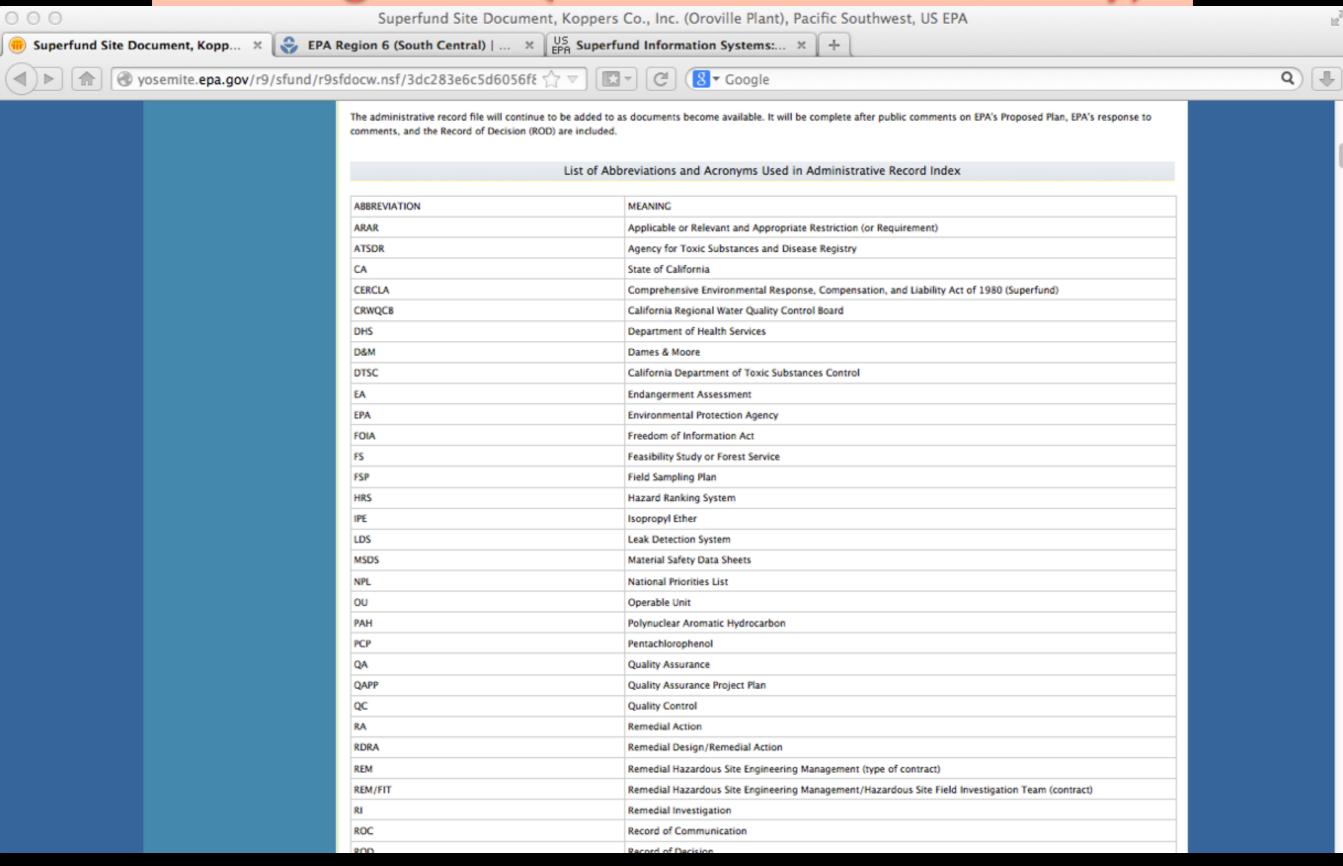


Following pages are examples of the resources linked to from this first long page we just scrolled through:

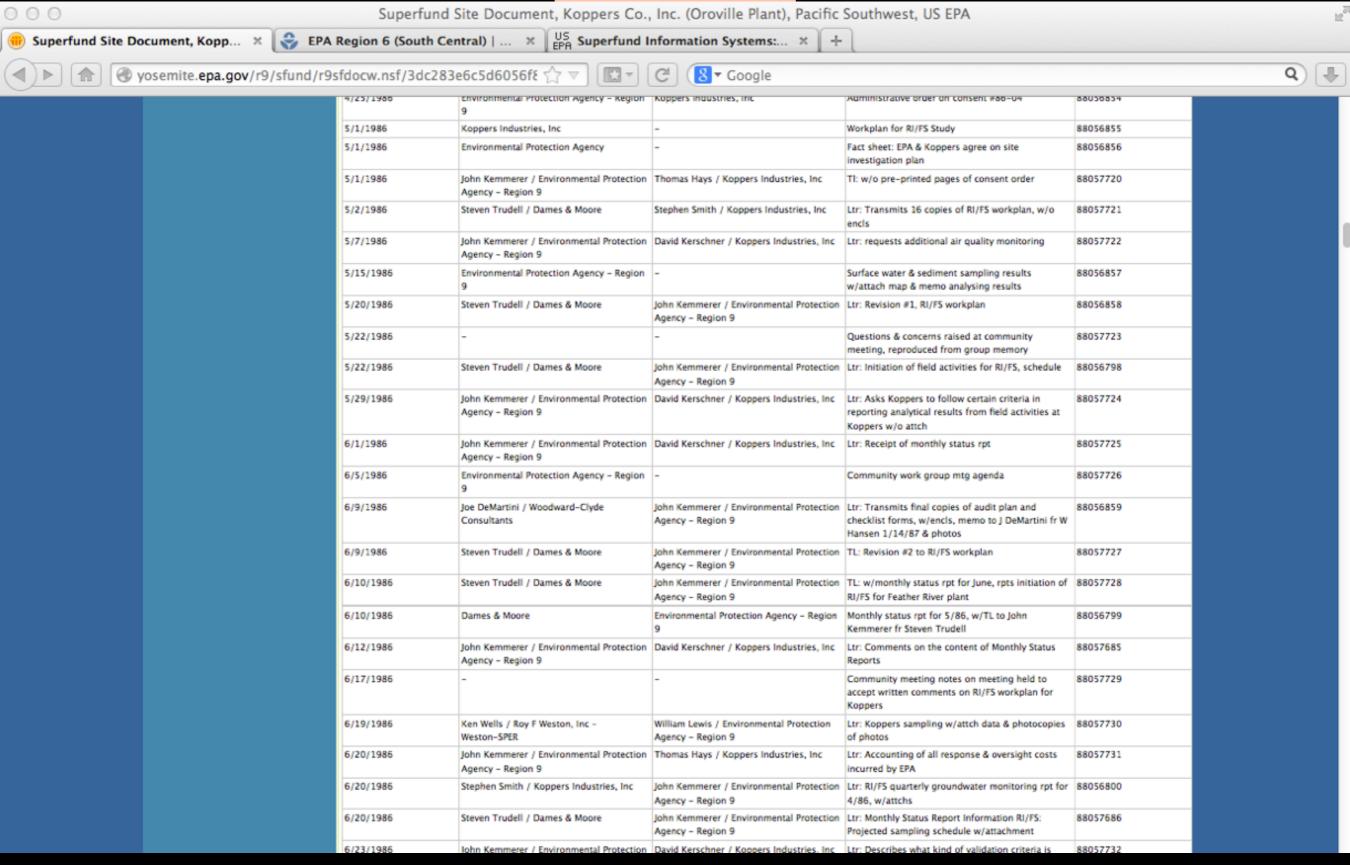
# Complete Index of the Administrative Record



# ...which goes on (definition of terms, handy)...

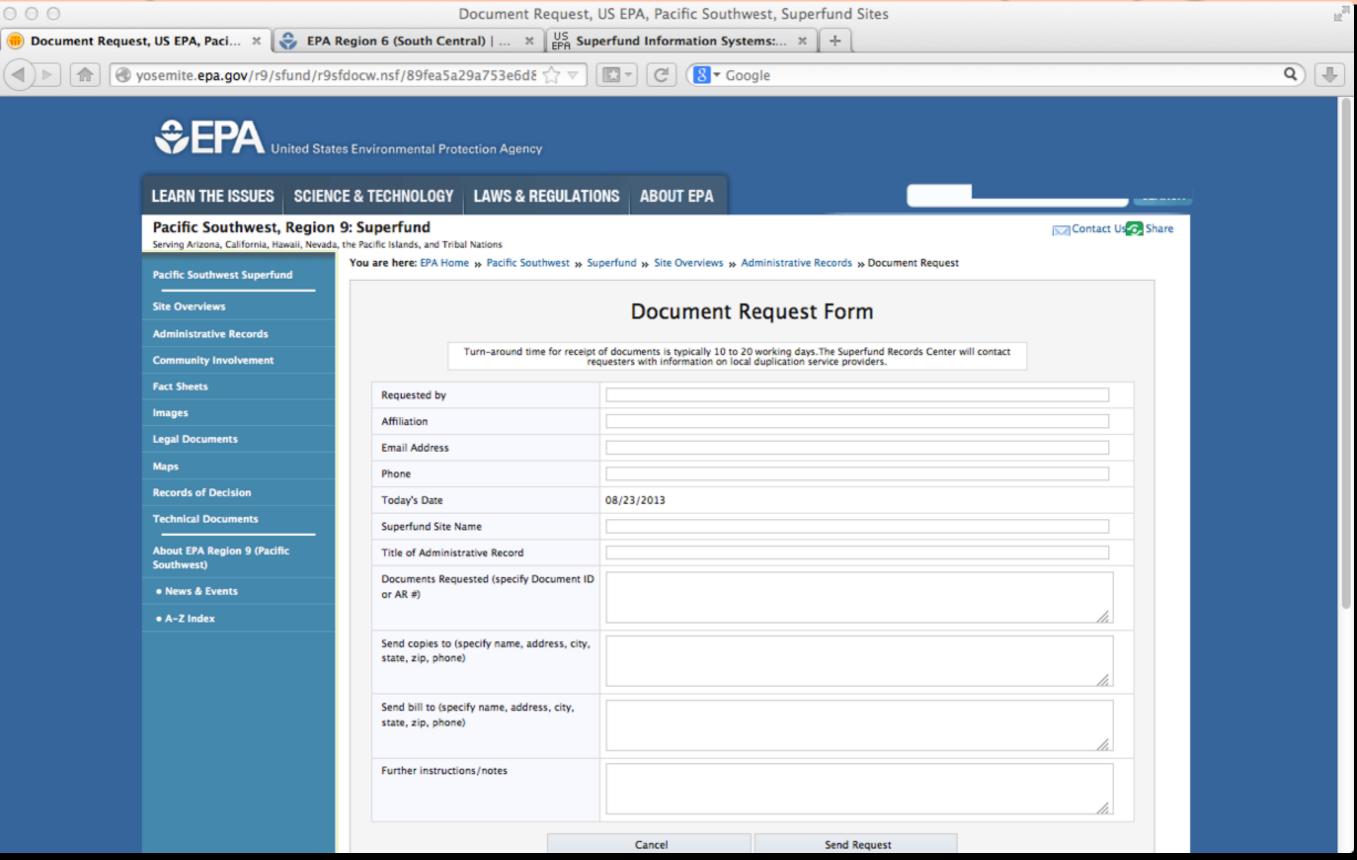






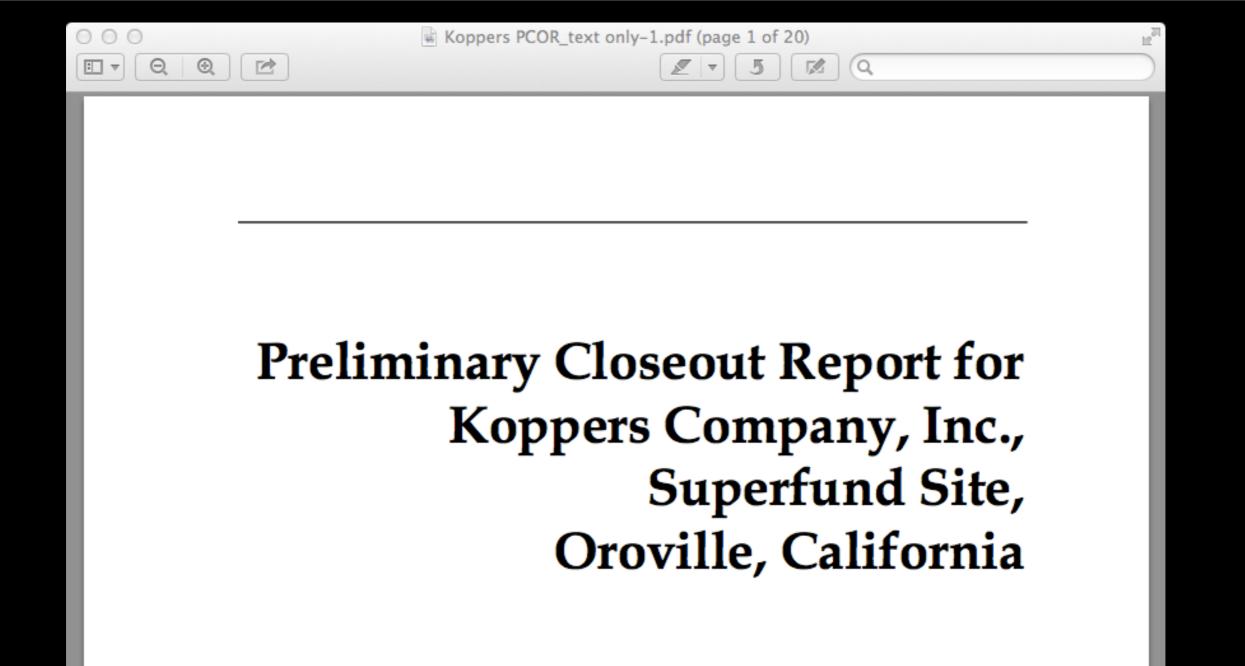
...and that's just Administrative Record index part 1 of 2 for the Koppers site; there are over 600 records available to peruse just on this one long page, part 1 of 2.

# ...and you can order records from link at top the page to...



Here are other examples of invaluable resources, all linked to from just that one Region 9 page shown above (slide 11) and accessible at:

http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/ ViewByEPAID/cad009112087?OpenDocument



Prepared by

U. S. Environmental Protection Agency

September 2003



# **Koppers Superfund Site**

U.S. Environmental Protection Agency \$ Region 9 \$ San Francisco, CA \$ January 2008

# Five-Year Review Fact Sheet

This fact sheet provides an update of activities at the Koppers Industries, Inc. Superfund Ste and also provides notice of the upcoming five-year review. It is being distributed to EPA's mailing list for the Koppers Ste and other interested parties. If you are not on the mailing list and would like to be added, please contact one of the EPA staff listed at the end of this fact sheet.

### Five-Year Review

The United States Environmental Protection Agency (EPA) is beginning the third five-year review for the Koppers Superfund Site in Oroville, CA and expects to complete the review in 2008. A five-year review is required by the Superfund law whenever the remedy for a site either leaves waste on site above levels that are safe for unrestricted use or will take longer than five years to reach cleanup goals. The purpose of the five-year review is to determine if the remedy is protective of human health and the environment.

For the Koppers site, the review is required because a) the soil cleanup goals were set at levels that allow for only commercial/industrial use (not residential use)

time. The groundwater treatment and soil consolidation remedies were found to be protective of human health and the environment. The second five-year review evaluated the remedies and any changes at the site that had taken place between December 1997 and February 2003. The review concluded that cleanup remedies remained protective of human health and the environment. The review noted that the deed restriction to prohibit residential use of the Koppers property was not yet in place; that action was completed in November 2003.

# Remedy Selection for Koppers

A Record of Decision (ROD) for Koppers was signed in 1989 and has been amended twice, first in 1996 and



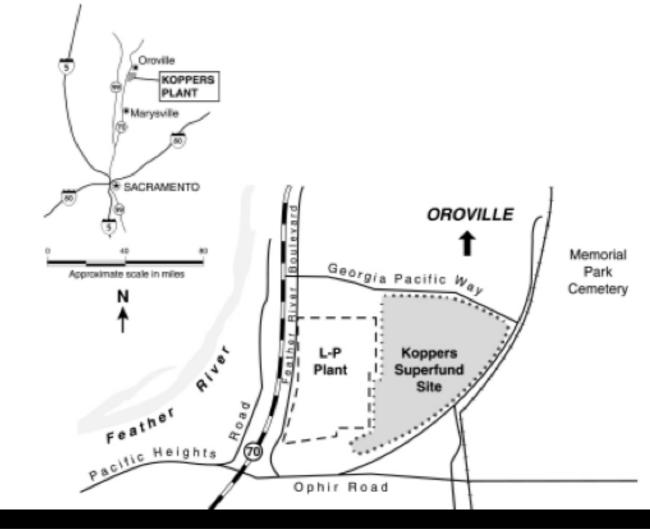
# Koppers Co., Inc. Superfund Site Update

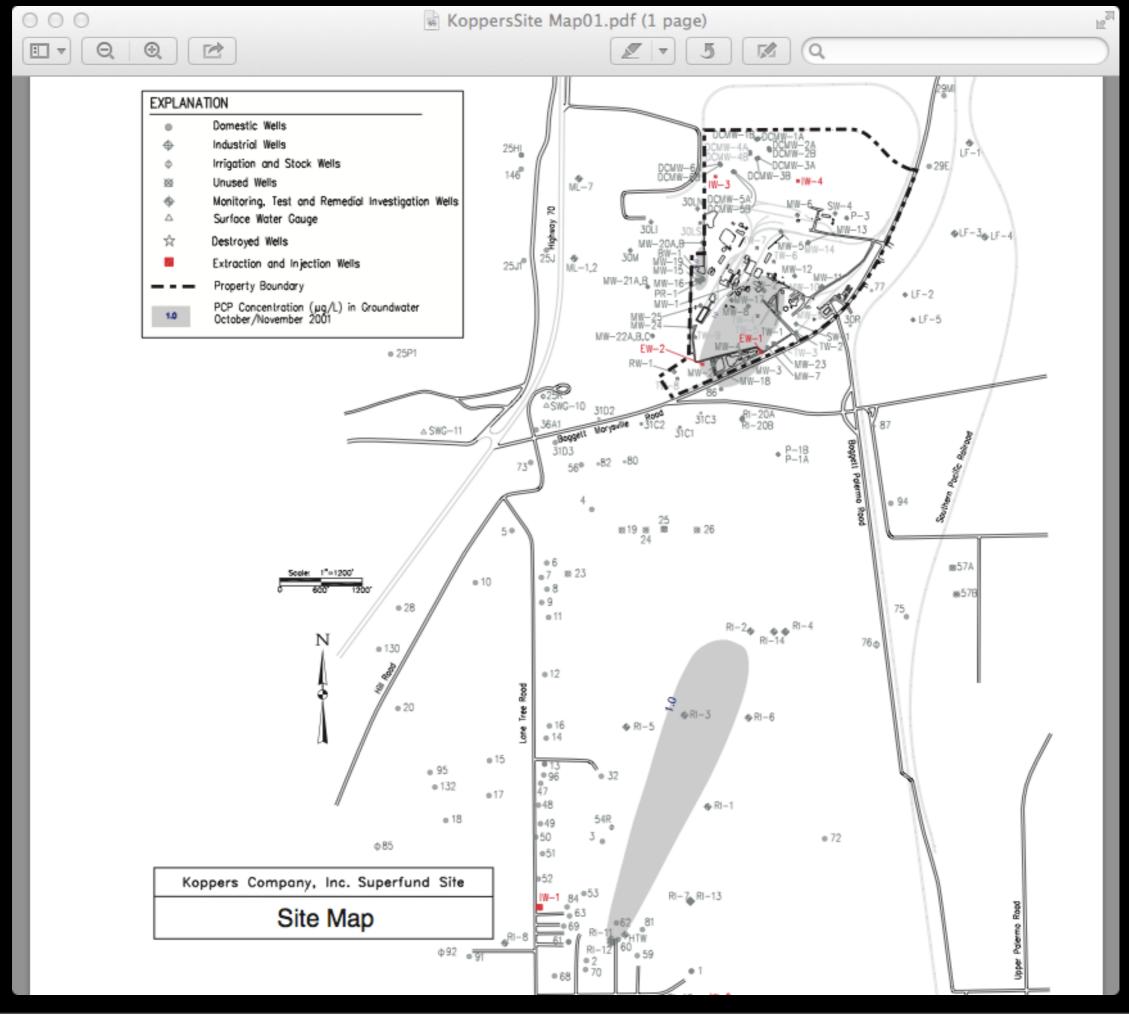
United States Environmental Protection Agency • Region 9 • August 2003

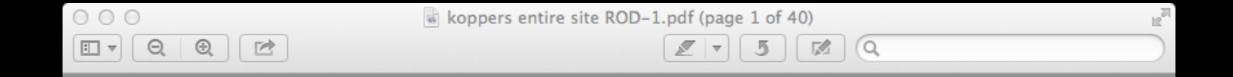
# EPA REQUESTS YOUR COMMENTS ON CONSENT DECREE AMENDMENT

### INTRODUCTION

The United States Environmental Protection Agency (EPA) invites the public to review and comment on a Consent Decree (CD) amendment concerning the cleanup of the Koppers Superfund site in Oroville, CA. The CD availability notice has been published in the Federal Register on August 7, 2003. In addition, the EPA has placed a notice in the City's local newspaper announcing the opening of the 30-day public comment period that ends on September 7, 2003. This fact sheet also







EPA/ROD/R09-89/037 1989

# **EPA Superfund Record of Decision:**

KOPPERS CO., INC. (OROVILLE PLANT) EPA ID: CAD009112087 OU 01 OROVILLE, CA 09/13/1989



# EPA PROPOSES GROUNDWATER REMEDY

MODIFICATION PLAN

### INTRODUCTION

Oroville.

California

The United States Environmental Protection Agency (EPA) is requesting public comments on this Proposed Plan¹ to modify the groundwater remedy at the Koppers Company, Inc. Superfund site (Koppers site) in Oroville, CA (see Fig. 1, page 2). No change is being proposed to the soils remedy. Based on remedial action monitoring and treatability studies the EPA has concluded that modifying the pump and treat (P&T) groundwater remedy is appropriate to complete the remedy.

EPA's preferred modifications include 1) issuing a Technical Impracticability (TI) Waiver for the groundwater cleanup at the former creosote pond and cellon blown areas due to the presence of dense nonaqueousphase liquids (DNAPL); 2) allowing Proposed Plan highlights key information about the remedy alternatives considered for groundwater cleanup, potential human health risks posed by the contaminants, and the present extent of groundwater cleanup at the site.

The modification alternatives considered, and EPA's preferred alternative, are presented for public review and comment. The comment period is from March 15, 1999 to April 13, 1999. EPA invites the public to a meeting scheduled for March 23, 1999 where EPA will present the plan and receive verbal

comments (See box below for more information).

March 1999

The EPA's proposed remedy modifications are preliminary and the final decisions will not be made until all significant public comments are considered. After review and response to public comments, the remedy modifications chosen will be formalized in a document called Amendment #2 to the Record of Decision (Amend.#2ROD). The remedy modifications selected for Amend.#2ROD could differ from what is outlined here based on public comment.

### PUBLIC COMMENT PERIOD AND COMMUNITY MEETING

A 30-day public comment period

Where: Oakdale Heights School

I could go on, but I suggest EPA Region 6 Superfund management visit these websites personally to take a hard look at the  $\Delta$  I point out between Region 6 standards for reporting, transparency and accountability compared to those upheld by Region 9 as presented in this example.

# Thank you Charles Curtis Grisham, Junior grish@me.com